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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,556	10/31/2003	Klaus Peter Selig	224820	3601

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EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,556

Applicant(s)

SELIG ET AL.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-25 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 11 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/31/03 & 12/5/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In these claims, “can be” is indefinite.

In claim 5, “analogous” is vague.

Drawings

3. The drawings are objected to because blocks in the drawings are not labeled with legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1-10, 12, 14-25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshiaki (JP 10-297334) in view of Knox et al. (US Patent No. 6,725,165).

Claim 1:

Toshiaki discloses a device for detecting and evaluating a weight exerted by a person sitting on a vehicle seat, the vehicle seat comprising load carrying parts, the device comprising:

- a. at least three load cells 24, 26, 28, 30, said load cells being non-linearly disposed and spaced apart and disposed on said load-carrying parts of the vehicle seat (see front page figure), the load cells each generating a weighing signal corresponding to the weight;
- b. an electronic evaluation circuit 32, adapted to receive and preprocess the weighing signals of the load cells (24-30) and generate an output signal based on the weighing signals, the evaluation circuit comprising an evaluation function with which a localization of the center of gravity of the weight acting on the vehicle seat can be carried out from the individual weighing signals of the at least three load cells (see abstract and para. [0013-0019]), and
- c. the evaluation circuit comprising a correction function , with which force bypasses can be taken into account in the forming of the output signal (para. [0013-0019]).

The reference fails to disclose that the evaluation circuit comprising a function for automatic zero-drift correction of the weighing signal, and the function for the automatic drift correction comprising a discriminator for differentiating drift in the weighing-signal from low loads of a limited time.

Nonetheless, the concept of considering zero drift signal in a similar system is well known in the art as taught in Knox et al. (Knox hereinafter), wherein zero drift function is used as weight correcting factor to compensate for stressing of the weight sensors during use or age of components, and other drift throughout the lifetime of the vehicle. Therefore, it would have been obvious to one skilled in the art to employ this concept in the system of Toshiaki because it would further enhance the accuracy for calculating the actual weight of the vehicle occupant.

Claim 2:

The load cells 24-30 are disposed such that the force introduction takes place vertically.

Claim 3:

It is not clear whether the load cells 24-30 in Toshiaki comprised of an inductively operating force transducer. However, the use of such sensors is conventional in the art. Thus, one skilled in the art would have used inductively operating force transducers in the system of Toshiaki as desired because they are well known and functionally equivalent to other vehicle seat sensors.

Claim 4:

Inductively operating force transducer operating on the eddy current principle is well known in the art. Thus, one skilled in the art would have used inductively operating force transducer that operates on eddy current principle as desired because they are functionally equivalent to the force sensors used in Toshiaki.

Claim 6:

Toshiaki fails to disclose one or more temperature sensors for generating measuring signals, the measuring signals being received by the evaluation circuit and used for temperature

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correction of the weighing signals in the generation of the output signal. However, the concept of using temperature correction is taught in Knox. Col. 8, second paragraph. Thus, a skilled artisan would have readily recognized using the temperature sensors in the system of Toshiaki to detect the temperature, which would be used as a correction value to obtain a more accurate detection.

Claim 7:

The system in Toshiaki comprises a sensor which is to be disposed in a footwell of the vehicle, the sensor generating a force-bypass weighing signal which corresponds to leg placement forces and is received by the evaluation circuit. Para. [0019].

Claim 8:

The evaluation circuit in Toshiaki comprises a function for forming a sliding mean value.

Claim 9:

The evaluation circuit for forming a sliding mean value in Toshiaki comprises a filter function, said filter function operating to detect values of the weighing signals induced by acceleration, deceleration and/or vibrations of the vehicle and/or by movements of the person on the vehicle seat, and to discard or use said values of the weighing signals in a way corresponding to predetermined criteria. Para 0013.

Claim 10:

In Toshiaki, the acceleration sensor 34 is equivalent to the evaluation circuit for the calculation of acceleration values of the vehicle, said functional unit exclusively evaluating changes over time of the weighing signals of the load cells.

Claim 12:

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The system in Toshiaki has vehicle interface via which vehicle data (such as acceleration/deceleration) can be received.

Claims 14-15:

It would be inherent in Toshiaki that the evaluation circuit comprises a data memory in which at least one of weighing signals, output signals and other measuring signals received by the evaluation circuit can be stored for a predetermined period of time, wherein the data memory has an associated memory area in which time signals correlating to stored signals can be stored,

Claim 16:

The rejection of claim 16 recites what was discussed in the rejection of claim 1, except claim 16 is a method claim.

Claim 17:

The correction of the zero point is initiated when predetermined events occur.

Claim 18:

The rejection of claim 18 recites what was discussed in the rejection of claim 13, except claim 16 is a method claim. Further, it would have been obvious to one skilled in the art to check the sensor in Toshiaki a predetermined time intervals to ensure the operability of the sensors.

Claims 19 and 20:

In the combined system of Toshiaki and Knox, it is inherent that an alarm signal is generated when a sensor malfunction is detected.

Claim 25:

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The rejection of claim 25 recites what was discussed in the rejection of claim 10, except claim 25 is a method claim.

Claims 27 and 28:

The rejection of claim 27 and 28 recites what was discussed in the rejection of claim 12, except claim 27 is a method claim.

Claim 29:

Knox teaches predetermined conditions used for zero-point correction in col. 7, lines 54-65 which are similar as those claimed in claim 29 of the present invention. It is only a matter of design choice which condition would be useful as a zero-point correction.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toshiaki (JP 10-297334) in view of Knox et al. (US Patent No. 6,725,165) and White (US Patent No. 6,561,542).

Claim 13:

Neither Toshiaki nor Knox teaches the evaluation circuit comprising a diagnostic function by means of which the functional capability of the load cells can be checked. Nonetheless, this idea is well known in the art as taught in White et al. (fig. 5). In light of this teaching, a skilled artisan would have incorporated the sensor diagnostics function in the system of Toshiaki and Knox as taught in Chitalia because it would ensure that the sensors function properly.

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Allowable Subject Matter

7. Claims 11, 26, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on Mon-Fri 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Julie Lieu
Primary Examiner
Art Unit 2636

Sept. 17, 04